Year 2 Year Maths Progression in Knowledge

NC Knowledge
Autumn Unit 1: Number and Place Value
- count in steps of 2, 3, and 5 from 0, and in tens from any number, forward and backward   - recognise the place value of each digit in a two-digit number (tens, ones)   - identify, represent and estimate numbers using different representations, including the number line   - compare and order numbers from 0 up to 100; use <, > and = signs   - read and write numbers to at least 100 in numerals and in words   - use place value and number facts to solve problems.   - Year 1: read and write numbers to at least 100 in numerals and words
Autumn Unit 2: Addition and subtraction
- solve problems with addition and subtraction: using concrete objects and pictorial representations, including those involving numbers, quantities and measures   - applying their increasing knowledge of mental and written methods   - recall and use addition and subtraction facts to 20 fluently, and derive and use related facts up to 100   - add and subtract numbers using concrete objects, pictorial representations, and mentally, including: a two-digit number and ones a two-digit number and tens two two-digit numbers adding three one-digit numbers   - show that addition of two numbers can be done in any order (commutative) and subtraction of one number from another cannot recognise and use the inverse relationship between addition and subtraction and use this to check calculations and solve missing number problems.
Autumn Unit 3: Measurement and Money
- recognise and use symbols for pounds (£) and pence (p); combine amounts to make a particular value   - find different combinations of coins that equal the same amounts of money   - solve simple problems in a practical context involving addition and subtraction of money of the same unit, including giving change
Autumn Unit 4: Multiplication and Division
- calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication (×), division (÷) and equals (=) signs   - show that multiplication of two numbers can be done in any order (commutative) and division of one number by another cannot   - solve problems involving multiplication and division, using materials, arrays, repeated addition, mental methods, and multiplication and division facts, including problems in contexts.   - recall and use multiplication and division facts for 2,5, and 10-times tables, including recognising odd and even numbers
NC Knowledge

Spring 1: Multiplication and Division

- recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables, including recognising odd and even numbers
- calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication (×), division (÷) and equals (=) signs
- show that multiplication of two numbers can be done in any order (commutative) and division of one number by another cannot
- solve problems involving multiplication and division, using materials, arrays, repeated addition, mental methods, and multiplication and division facts, including problems in contexts.

Spring 2: Number and Statistics

- interpret and construct simple pictograms, tally charts, block diagrams and simple tables
- ask and answer simple questions by counting the number of objects in each category and sorting the categories by quantity
- ask and answer questions about totalling and comparing categorical data.

Spring 3: Geometry: Property of shape

- identify and describe the properties of 2-D shapes, including the number of sides and line symmetry in a vertical line
- identify and describe the properties of 3-D shapes, including the number of edges, vertices and faces
- identify 2-D shapes on the surface of 3-D shapes [for example, a circle on a cylinder and a triangle on a pyramid]
- Compare and sort common 2-D and 3-D shapes and everyday objects

Spring 4: Fractions

- recognise, find, name and write fractions ½, 1/3, 2/4, and ¾ of a length, shape, set of objects or quantity
- write simple fractions for example, ½ of 6 = 3 and recognise the equivalence of 2/4 and ½

Spring 5: Length and Height

- choose and use appropriate standard units to estimate and measure length/height in any direction (m/cm); using rulers, scales,
- compare and order lengths and record the results using >, < and =

Summer 1: Geometry: Position and direction

- order and arrange combinations of mathematical objects in patterns and sequences
- use mathematical vocabulary to describe position, direction and movement, including movement in a straight line and distinguishing between rotation as a turn and in terms of right angles for quarter, half and three-quarter turns (clockwise and anticlockwise).

Summer 2: Problem solving: Efficient methods

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Summer 3: Measurement: Time

- compare and sequence intervals of time
- well and write the time to five minutes, including quarter past/to the hour and draw the hands on a clock face to show these times
- know the number of minutes in an hour and the number of hours in a day

Summer 3: Measurement: Mass. Capacity and temperature

• Choose and use appropriate standard units to estimate and measure (kg/g); temperature (°C); capacity (litres/ml) to the nearest appropriate unit, using thermometers and measuring vessels
• compare and order, mass, volume/capacity and record the results using >, < and =
Summer 4: Investigations
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Year 2 Maths Progression in Skills and Knowledge

Y1/2 Working Mathematically:
• become **fluent** in the fundamentals of mathematics, including through varied and frequent practice with increasingly complex problems over time, so that pupils develop conceptual understanding and the ability to recall and apply knowledge rapidly and accurately.
• **reason** mathematically by following a line of enquiry, conjecturing relationships and generalisations, and developing an argument, justification or proof using mathematical language
• can **solve problems** by applying their mathematics to a variety of routine and nonroutine problems with increasing sophistication, including breaking down problems into a series of simpler steps and persevering in seeking solutions.
• By the end of year 2, pupils should know the number bonds to 20 and be precise in using and understanding place value.